

REMARKS

Claims 1-18 are all the claims pending in the application.

Applicant amends claims 3, 9, 11 and 13-18 for precision of language and to ensure proper antecedent basis. No estoppel is created.

The Examiner indicates that a formal drawing is required. However, the formal drawing has been filed on January 4, 2001. Therefore, the drawing requirement has been met by the formal drawing filed January 4, 2001, and the Examiner is requested to acknowledge the receipt of, and approve, this formal drawing.

The Examiner rejects all of the pending claims 1-18 under 35 U.S.C. §103(a) as being unpatentable over Montgomery in view of Halahmi et al. (Halahmi). Applicant respectfully traverses this rejection as follows.

Applicant's invention provides data processing devices (claims 1-12) and methods of operating data processing devices (claims 13-18) which comprise unique combinations of features and method steps, including, *inter alia*:

a light-emitting unit which illuminates a display unit, a detector which detects whether a specific functional part in the data processing device is in operation or not, and a controller which limits a current to be supplied to the light-emitting unit when the detector has detected that the specific functional part in the data processing unit is in operation (claim 1; see also claims 5, 7, 13, 15 and 16); and

a plurality of light-emitting units which illuminate a display unit, a detector which detects whether a specific functional part in the data processing device is in operation or not, and a controller which controls a number of the light-emitting units to be turned on, when the detector has detected that the specific functional part in the data processing unit is in operation (claim 3; see also claims 9, 11, 14, 17 and 18).

Montgomery discloses peak current reduction method and apparatus for a radiotelephone handset 104 where operating power is removed from display 120 during receive and transmit time intervals. In particular, handset 104 has a switch 123 which selectively de-couples display 120 from the power source 122 in response to a display control signal from controller 112. (*See Id.*, col. 5, lines 1-7). Controller 112 provides the display control signal during transmit and receive time intervals which are defined by time slots of a communication protocol. (*See Id.*, col. 5, lines 45-52). While Montgomery discloses that the time intervals for removing power from display 120 may be longer or shorter in duration than the time slots (*see Id.*, col. 5, lines 29-32), Montgomery does not disclose or suggest detecting whether a specific functional part of its handset 104 (such as its receive/transmit circuits) is in operation or not, as required by Applicant's claimed invention.

The Examiner acknowledges that Montgomery does not disclose such a feature (see Office Action, page 3), and relies on Halahmi to supply this acknowledged deficiency.

Halahmi discloses power saving means and method for use in its system 10 which includes processor 12 and peripherals 14-20, such as display 16 (*see Id.*, col. 1, lines 46-60). Processor 12 performs various repetitive operations ("DO-LOOPS"), and includes various

subsystems 60*i* which are idle during a particular DO-LOOP. (*See Id.*, col. 3, lines 1-23).

According to Halahmi:

It is the function of the present invention to place the idle systems 60*i* of processor 12 temporarily into a power-down state or “sleep” state so that overall power consumption is minimized. (*Id.*, col. 3, lines 23-26)

In this regard, Halahmi discloses circuit 38 which determines whether or not a particular subsystem is active during, or as a consequence of, a DO-LOOP. (*see Id.* col. 3, line 62 through col. 4, line 12).

The Examiner alleges that it would have been obvious to implement Halahmi’s circuit 38 into Montgomery’s handset 104 in order to detect activity of Montgomery’s receive/transmit circuits and power down light emitting diodes 136 accordingly (see Office Action, paragraph 5). However, such an implementation is not supported by, and is contrary to, the actual disclosure of these references. That is, Montgomery is controlling the power supply to its light emitting diodes based on the communication time slots. It would be redundant and counter-intuitive to add an unnecessary circuit (such as Halahmi’s circuit 38) in Montgomery’s portable handset to perform a function which is already handled in a more economic manner. On the other hand, Halahmi does not disclose or suggest that its circuit 38 should somehow be used to remove power to its peripherals, such as its display 16. Instead, Halahmi is concerned with reducing power consumed by its processor 12 during DO-LOOPS, and addresses this problem by powering down the idle subsystems of processor 12. Contrary to the Examiner’s allegation, one

skilled in the art of telecommunication would certainly not equate Halahmi's DO-LOOPS with Montgomery's functions of transmitting and receiving radio communication.

Thus, absent Applicant's own disclosure, one skilled in the art would not have been motivated to combine Montgomery and Halahmi as proposed by the Examiner. In fact, a more reasonable combination of these two references would result in a system having two types of power conservation: (1) Montgomery's -- for conserving power by removing operating power from a display, and (2) Halahmi's -- for conserving power by removing operating power from an idle subsystem of a system processor.

Furthermore, Applicant's independent claims 3, 9, 11, 14, 17 and 18 recite a plurality of light-emitting units which illuminate a display unit, and a controller which controls a number of the light-emitting units to be turned on, when the detector has detected that the specific functional part in the data processing unit is in operation.

Montgomery does not disclose or suggest a controller which controls a number of its light-emitting diodes 136 to be turned on during transmit, or receive, time intervals. Instead, Montgomery simply interrupts current flow to all of its light-emitting diodes 136 during the transmit or receive time intervals. (See Id. col. 5, lines 3-7). On the other hand, Halahmi, which does not even mention light emitting diodes for its display 16, is incapable of suggesting such a controller.

In summary, Applicant's independent claims 1, 3, 5, 7, 9, 11 and 13-18, as well as the dependent claims 2, 4, 6, 8, 10 and 12 (which incorporate all the novel and unobvious

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features of their respective base claims), would not have been obvious from any reasonable combination of Montgomery and Halahmi at least for these reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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Date: September 24, 2003